of water to said effluent water chamber, the oil disengagement chamber having a low liquid level which is higher than the under flow baffle, the outflow of said substantially oil free volume of water from said effluent water chamber being limited by flow retarding means to a rate of outflow which is a function of the head of the liquid in said effluent water chamber; such that, during operation, the level of said oil and water mixture will rise from a chamber low liquid level up to a higher liquid level and then return to said chamber low liquid level, thereby defining an oil and water mixture active lag capacity in said oil disengagement chamber, such that, for a predefined range of inflows into said oil disengagement chamber, outflow from said effluent water chamber will contain a proportion of oil in water substantially below a predefined limit.

34. (Amended) The separator of Claim 33, wherein said flow retarding means is operable to accumulate said oil and water mixture in said oil disengagement chamber in an oil and water mixture accumulation volume above said chamber low liquid level.

38. (Amended) The separator of Claim 33, wherein said flow retarding means is sized with reference to expected inflow of said oil and water mixture into said oil disengagement chamber such that, during operation, the level of said oil and water mixture will rise from said chamber low liquid level and then return to said chamber low liquid level, thereby defining said oil and water mixture accumulation volume above said chamber low liquid level.

39. (Amended) The separator of Claim 38, wherein said accumulation volume is sized with reference to

(a) inflow rate; and

(b) desired residence time of said oil and water mixture in said oil disengagement chamber.

40. (Amended) An oil from water separation system including an oil disengagement chamber having an accumulation volume defined between a chamber high liquid level and a chamber low liquid level; said accumulation volume caused to exit from said chamber on attainment of said chamber high liquid level; such that, during operation, the level of said oil and water mixture will rise from said chamber low liquid level up to said chamber high liquid level and then return to said chamber low liquid level, thereby defining an oil and water mixture active lag capacity in said oil disengagement chamber between said chamber high liquid level and said

chamber low liquid level, such that, for a predefined range of inflows into said oil disengagement chamber, outflow from said system will contain a proportion of oil in water substantially below a predefined limit.

42. (Amended) An oil from water separator including an oil disengagement chamber adapted to receive an oil and water mixture and retain it for a sufficient time in a relatively undisturbed state whereby oil in the mixture floats to the top of the mixture resulting in a substantially oil free volume of water having a layer of oil derived from said oil and water mixture floating on the surface thereof, and means for retarding outflow from said chamber until said mixture reaches a predetermined chamber high liquid level whereupon said substantially oil free volume of water is caused to exit said chamber; such that, during operation, the level of said oil and water mixture will rise from said chamber low liquid level up to a higher liquid level and then return to said chamber low liquid level thereby defining an oil and water mixture active lag capacity in said oil disengagement chamber, such that, for a predefined range of inflows into said oil disengagement chamber, outflow from said separator will contain a proportion of oil in water substantially below a predefined limit.

48. (Amended) The separator of Claim 42, wherein, on reaching said chamber high liquid level, outflow is initiated and maintained until a predetermined low liquid level in said chamber is reached at which time outflow is terminated by said means for retarding outflow.

51. (Amended) The separator of Claim 42, wherein said means for retarding outflow comprises a retention wall having at least one aperture at a predetermined level passing therethrough, said at least one aperture adapted to regulate flow of water from said disengagement chamber when said mixture is above said predetermined chamber high liquid level.

52. (Amended) An oil from water separator including an oil disengagement chamber adapted to receive an oil and water mixture and retain it for an extended time in a relatively undisturbed state whereby oil in the mixture floats to the top of the mixture resulting in a substantially oil free volume of water having a layer of oil derived from said oil and water mixture floating on the surface thereof, outflow from said chamber being controlled in a predetermined way by flow retarding means; such that, during operation, the level of said oil and

water mixture will rise from said chamber low liquid level up to a higher liquid level and then return to said chamber low liquid level thereby defining an oil and water mixture active lag capacity in said oil disengagement chamber, such that, for a predefined range of inflows into said oil disengagement chamber, outflow from said separator will contain a proportion of oil in water substantially below a predefined limit.

53. (Amended) An oil from water separator including an oil disengagement chamber adapted to receive an oil and water mixture and retain it for a sufficient time in a relatively undisturbed state whereby oil in the mixture floats to the top of the mixture resulting in a substantially oil free volume of water having a layer of oil derived from said oil and water mixture floating on the surface thereof, wherein outflow from said chamber is limited by flow retarding means to a predetermined function of the level of said oil and water mixture in said chamber; said oil disengagement chamber is partially separated from an effluent water chamber by an under flow baffle which ducts said substantially oil free volume of water to said effluent water chamber.

54. (Amended) The separator of Claim 53, wherein said flow retarding means is operable only between said chamber low liquid level and a chamber high liquid level.

58. (Amended) The separator of Claim 53, wherein said flow retarding means is sized with reference to expected inflow of said oil and water mixture into said oil disengagement chamber such that, during operation, the level of said oil and water mixture will rise from said chamber low liquid level up to a higher liquid level and then return to said chamber low liquid level, thereby defining for each situation an oil and water mixture active lag capacity between said higher liquid level and said chamber low liquid level.

59. (Amended) The separator of Claim 58, wherein said active lag capacity is sized with reference to:

(a) inflow rate; and

(b) desired residence time of said oil and water mixture in said oil disengagement chamber.

60. (Amended) A method of conversion of a conversion of an oil from water separator which normally operates liquid full into an oil from water separator which has an oil